

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1-6. (cancelled)

7. (currently amended): A method of producing a glass substrate for a mask blank, comprising a step for eliciting a defect remaining on the main surface of the glass substrate, wherein a post-processing step ~~that includes precision polishing~~ is carried out after the step for eliciting a defect and includes a precision polishing step for providing the main surface with precision polishing;

the step of eliciting the defect comprising the step of;

magnifying a defect on the main surface by etching the main surface to the extent that the defect can be detected during a defect inspection step that is carried out after the precision polishing step.

8. (currently amended): The method of producing a glass substrate for a mask blank according to claim 7, wherein the post-processing step includes, in addition to the precision polishing step, ~~comprises a precision polishing step for providing the main surface with precision polishing and~~ a cleaning step for cleaning the main surface after the precision polishing step.

9. (original). The method of producing a glass substrate for a mask blank according to claim 8, wherein the main surface of the glass substrate after the cleaning step has roughness of 0.2 nm or less in terms of the root mean square roughness (RMS).

10.-11. (canceled)

12. (currently amended): A method of producing a glass substrate for a mask blank whereby to produce a glass substrate by, comprising the steps of:

carrying out a rough polishing step for roughly polishing a surface of the glass substrate by using abrasive particles having a predetermined average particle size;~~then~~

carrying out a precision polishing step for polishing the surface of the glass substrate by using abrasive particles having an average particle size that is smaller than the aforesaid predetermined average particle size;~~wherein~~

etching, prior to the precision polishing step, a roughly polished ~~the~~ surface of the glass substrate ~~is etched~~ to elicit a crack, which extends from the surface of the glass substrate in the direction of the depth and ~~remains~~ which might remain on the surface of the glass substrate even after the precision polishing step, ~~in;~~ and

carrying out a defect inspection step ~~carried out~~ after the precision polishing step;

wherein the crack is magnified by the etching step to the extent that the crack can be detected by the defect inspection step.

13. (currently amended): The method of producing a glass substrate for a mask blank according to claim 12, ~~wherein further comprising~~ a cleaning step ~~for~~ of cleaning the main surface of the glass substrate ~~is carried out~~ after the precision polishing step.

14. (currently amended): The method of producing a glass substrate for a mask blank according to claim 13, wherein the surface of the glass substrate after the cleaning step has a roughness of 0.2 nm or less in terms of the root mean square roughness (RMS).

15. (original): The method of producing a glass substrate for a mask blank according to claim 13 or 14, wherein the cleaning step uses a solution having an etching function as a cleaning solution, and the cleaning step is carried out under a condition that causes the glass substrate to be removed by more than 0 μm and below 0.01 μm by etching.

16. (currently amended): The method of producing a glass substrate for a mask blank according to claim ~~11 or~~ 12, wherein the defect inspection step is carried out by a visual inspection.

17. (currently amended): The method of producing a glass substrate for a mask blank according to claim ~~10 or~~ 12, wherein the etching step removes the surface of the glass substrate that is subjected to precision polishing by 0.01 to 0.2 μm .

18.-19. (canceled).

20. (new) A method of producing a glass substrate for a mask blank according to claim 7, wherein the precision polishing step is carried out so that the surface of the glass substrate has flatness required for a selected one of ArF excimer laser, F2 excimer laser, and EUV.

21. (new) A method of producing a glass substrate for a mask blank according to claim 12, wherein the precision polishing step is carried out so that the surface of the glass substrate has flatness required for a selected one of ArF excimer laser, F2 excimer laser, and EUV.

22. (new) A mask of producing a glass substrate for a mask blank according to claim 12, wherein the abrasive particles used in the rough polishing step are cerium oxide while the abrasive particles used in the precision polishing step are colloidal silica.

23. (new) A mask of producing a glass substrate for a mask blank according to claim 12, wherein the etching step is an isotropical etching step.